

## **REMARKS**

Claims 1-6 and 9-36 are pending in the present application. Claims 5-6 are rejected. Claims 1-4 and 9-36 are withdrawn from consideration as being drawn to a non-elected invention. Applicant appreciates that the last Amendment and Response was successful in overcoming the rejections outstanding at that point, i.e. as regards enablement. All of the rejections now outstanding are new rejections.

### ***Objection to the Specification***

The Examiner objects to the specification because some sequences are referred to without noting their specific SEQ ID NO: Applicant herein corrects this formality issue by providing the SEQ ID NOs: for all the sequences identified in Figure 1. Obviously no issue of new matter may arise since the SEQ ID NOs: are provided for each sequence in Table 8.

### ***Rejection under 35 U.S.C. 112, second paragraph***

The Examiner alleges that claim 5 is unclear because it recites “wherein said ZA loop of said bromodomain consists of an amino acid sequence selected from the group consisting of SEQ ID NOs. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 42” yet SEQ ID NO: 19 comprises more than just a ZA loop. Applicant herein amends the claim to read “wherein said ZA loop of said bromodomain consists of an amino acid sequence selected from the group consisting of SEQ ID NOs. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 42 and the ZA loop of SEQ ID NO: 19.” Likewise, claim 6 is amended in the same manner.

### ***Rejection under 35 U.S.C. 103***

The Examiner alleges that claims 5 and 6 are unpatentable over Denis *et al.*, *Genes Dev.* 10:261-271 over Crabtree *et al.*, U.S. Patent 5,837,840. According to the Examiner, Denis *et al.* teach the amino acid sequence of the bromodomain of SEQ ID

NO: 19, however no fragments of the entire protein consisting of the ZA loop are taught. Further, the Examiner cites to Crabtree *et al.* for teaching that fragments of the protein may be used to produce and detect antibodies. The Examiner continues that it would have been obvious to use fragments of the protein (including a ZA loop) for producing antibodies to detect the levels of the protein expressed in PBL cells for diagnosing and monitoring lymphocytic leukemia.

Applicant respectfully submits that Denis *et al.* do not characterize the function of the bromodomain. The function of the bromodomain was not known at the time of the Denis *et al.* publication in 1996. Applicant discovered the structure and function of the bromodomain as was reported in, for instance, a 1999 *Nature* paper. The name of the ZA loop as the protein sequence that connects helix Z and helix A was first used by Applicant. Therefore, Denis *et al.* do not teach the functional significance of the ZA loop and therefore do not teach or suggest the structure of the ZA loop. Stated differently, one of ordinary skill in the art would find no motivation to identify or isolate the ZA loop from the teachings of the prior art.

### ***Fees***

No additional fees are believed to be necessary in connection with this Response. However, if this is in error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment, or credit any overages.

***Conclusion***

Applicant believes that the claims are in condition for allowance. Withdrawal of the rejections is respectfully requested. If a discussion with the undersigned will be of assistance in resolving any remaining issues, the Examiner is invited to telephone the undersigned at (201) 487-5800, ext. 114, to effect a resolution.

Respectfully submitted,

A handwritten signature in cursive script, reading "J. David Smith". The signature is written in dark ink and is positioned above a horizontal line.

J. David Smith  
Attorney for Applicant(s)  
Registration No. 39,839

KLAUBER & JACKSON  
411 Hackensack Avenue  
Hackensack, NJ 07601  
(201) 487-5800